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ABSTRACT

Based on data collected for a study completed in the fall of 1972, the report presents baseline data concerning selected characteristics of personnel and situational factors relative to the graduate teaching assistantship system in industrial education programs throughout the United States. Chapter 1 deals with the nature of the study, the research problem, definitions, literature, population, and procedures. Chapter 2 offers a presentation of the results. The data from the surveys are tabulated and discussed. The study focuses on: (1) demographic characteristics of personnel holding assistantship positions, (2) the relationship of roles filled by teaching assistants to selected situational factors of their employment, and (3) practices employed in industrial education departments to facilitate maximum use of personnel in assistantship positions. The appendix includes the department head information form and the survey form for graduate teaching assistants in industrial eduation programs as used in the survey. (MW)

ED 098305

GRADUATE TEACHING ASSISTANTS IN INDUSTRIAL EDUCATION PROGRAMS

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PREFACE

This report presents baseline data concerning selected characteristics of personnel and situational factors relative to the graduate teaching assistantship system in industrial education programs throughout the United States.

The content of this report is based on data collected for a doctoral study completed in the Fall of 1972 at Indiana University.

Appreciation is expressed to industrial education department heads who responded to the initial request for names of teaching assistants and to the teaching assistants, without whose input the study would not have been possible.

Appreciation is extended to personnel at the Ball State University Research Office for processing data and to Mr. Thomas Tomlinson and Mr. Charles Ridgeway, Department of Industrial Education and Technology, Ball State University for printing selected materials in the report. The authors are also indebted to Ms. Joleen Trexler and Ms. Thetis Wesley, secretaries, Vocational Education Program Area, Indiana University for typing the manuscript.

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CHAPTER I

Nature of the Study

The graduate teaching assistant has become an established member of the higher education system in the United States. During the two and one half decades after 1940, the total number of teaching assistants in all academic areas increased from several thousand to more than sixty-three thousand (Hunter, 1967). The great influx of students into universities and colleges after World War II combined with a shortage of faculty members appear to be factors related to the rapid growth of the teaching assistant system.

Graduate students in assistantship positions may assume primary teaching responsibility or assist full-time faculty in performing necessary instructional tasks such as teaching, grading papers, constructing tests, etc. When the student is assigned tasks which complement his career objective, the assistantship provides invaluable experiences, which it is assumed, will enhance the preparation of the individual for employment following graduation. In return for the duties performed, the teaching assistant receives a stipend or a combination stipend and tuition or fee waiver.

Development of the teaching assistant system in industrial education programs of many higher education institutions appears to parallel the national movement. It seems reasonable to assume that program characteristics and concerns associated with the university-wide use of assistants

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Data in this technical report have been compiled from information collected by Dr. Thomas W. Gurbach in conjunction with a previous doctoral research study, Graduate Teaching Assistant Functions in Industrial Education Programs. (Doctoral Dissertation, Indiana University) Ann Arbor, Michigan: University Microfilms, 1973.

apply in large measure to industrial education teaching assistants. However, investigations of the teaching assistant component of the higher education system have provided only broad multi-department profiles. This study was undertaken to provide national baseline data concerning utilization of teaching assistants in instructional programs of industrial education departments.

Problem

The purpose of this study was to describe selected situational and personal characteristics associated with graduate teaching assistants in industrial education departments of colleges and universities within the United States.

Definitions

The following terms were adopted for use throughout the study.

Graduate Assistant (GA). This generic term applies to a graduate student who is (1) currently pursuing the requirements for a master's, specialist's, or doctor's degree and (2) employed by a college or university to assist regular faculty or staff in one or more of the following areas: teaching, research, administration or service. A teaching assistant is one type of graduate assistant.

Teaching Assistant (TA). A term which applies to a graduate student who is (1) currently pursuing requirements for a master's, specialist's or doctor's degree and (2) employed by a college or university to assume teaching responsibilities or to assist regular faculty members with the instruction of undergraduate or graduate students in the industrial education department.

Industrial Education. "A generic term which applies to all types of education related to industrial arts education, vocational industrial education (trade and industrial education), and much technical education" (Definition of Terms, American Vocational Association, no date).

Teaching Assistant Role. A term referring to various functions or duties performed by teaching assistants ranging from those associated with the primary responsibility for teaching a class or classes to those functions or duties which are non-teaching in scope but directly support the instructional process. This range of functions or duties is divided into four hierarchal roles similar to those identified by Nowlis et al. (1968). An association of role classification, duties and distinguishing characteristics is displayed in Table 1.

Literature

Teaching assistants have been a part of higher education in the United States for nearly a century. The use of graduate students to assist in the instructional process in institutions of higher education was apparently initiated at Johns Hopkins University during its first year of operation in 1876. College graduate fellowships of 500 dollars each were awarded to twenty recipients. Financial support for graduate students was deemed necessary for establishing and maintaining a high quality graduate program. Graduate students receiving fellowships were expected to perform "occasional services" for the benefit of the university. Of the first group, several members lectured or presented courses. (French, 1946).

The number of teaching assistants increased modestly in the following decades. However, a National Science Foundation (1957) study of graduate student enrollment and support and a similar Office of Education survey

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TABLE 1. TEACHING ASSISTANT CLASSIFICATIONS BY ROLE, DUTIES AND DISTINGUISHING CHARACTERISTIC

Classification	Duties	Distinguishing Characteristic
ROLE A*	Teaches all or major content of the course	Perceived as being similar to regular faculty
ROLE B*	Presents occasional lectures and/or demonstrations	Perceived as being subsidiary to regular faculty
ROLE C*	Leads discussion section of a course or supervises a laboratory section of a major course	Perceived as being a laboratory assistant
ROLE D	Performs non-instructional tasks related to an instructional class or program	Perceived as being a non-instructional assistant

*Teaching assistants in ROLES A, B, and C may perform selected non-instructional tasks related to their teaching assignment. Non-instructional duties or acts include: prepares examinations, proctors examinations, grades examinations, grades papers, grades projects, evaluates student performance, counsels students, develops course materials, maintains equipment, sets up equipment, sets up demonstrations, keeps records.

(Hunter, 1967), both nationwide studies, reflect the trend of rapid increases in the number of stipends awarded for performance of assistantship duties. The number of stipends awarded for teaching assistantships rose from 16,523 in 1954 to 63,412 in 1964, an increase of approximately 284 percent.

Education, one of the five academic areas identified, ranked next to last in both 1954 and 1964 in total number of duty stipends but nevertheless showed an increase of approximately 700 percent during that period. In the field of education, teaching assistantships remained dominant by approximately a two-to-one ratio over research assistantships.

The tremendous growth in undergraduate enrollment has been cited as the primary factor for the large increase in the number of graduate teaching assistants. Legislators and university administrators have used the assistantship position as a professional personnel resource for coping with the great influx of undergraduate students (Chase, 1970).

Effective use of this resource suggests attention be given to two views of the assistantship position. First, the position of the assistant may be seen as that of a quasi faculty member. In this instance the assistant is viewed as an individual who performs various instructional and related functions to assist the department in executing its assigned responsibilities in the educational program. Second, the position of the assistant may be viewed as that of a graduate student who performs assigned assistantship functions but whose major objective is to earn an advanced degree. In the second instance, the focus is on providing the student with financial assistance and a program of experiences designed to prepare the individual for a successful career upon completion of the degree. Without the financial support made possible by the assistantship, many students would be unable to

pursue an advanced degree. Since colleges and universities are concerned with building and maintaining programs, the graduate assistantship is seen as a means of attracting highly qualified students into the graduate program (Fidler, 1968).

Since the mid-1960s a number of opinions, statements and survey research efforts have focused attention on deficiencies associated with the assistantship program. Poor quality undergraduate instruction provided by teaching assistants and undesirable conditions of employment are among the most frequently cited criticisms (Monson, 1970; Nowlis, Clark, and Rock, 1968; Task Force on Higher Education, 1971; The Report of The President's Commission on Campus Unrest, 1970; and Wise, 1967).

The poor quality of undergraduate instruction frequently attributed to the use of teaching assistants is often related to undesirable aspects of assistantship employment, such as, long hours, low pay, and little if any guidance (Monson, 1970). The graduate student has little control over these factors because he is both student and teacher in the same department. As a result the teaching assistant may be reluctant to voice complaints about his status. Monson (1970) concludes that without a mechanism for correcting the perceived deficiencies the morale of the teaching assistant deteriorates and adversely affects his performance as a teacher. The impact of low morale, and consequently poor teaching, upon the quality of undergraduate education can be quite substantial. Some indication of the potential for this problem is provided by the Muscatine Report (1968). This institutional study revealed that 31 percent of the undergraduate classes at Berkeley were taught by teaching assistants. When classes or laboratory sections with up to 30 students were considered, more than 60 percent of such classes were taught by teaching assistants. That the teaching assistant system was considered a

major problem at the University of California is attested to by the fact that (then) President Kerr implemented a university-wide study to find ways to improve the effectiveness of the system.

In The Report of the President's Commission on Campus Unrest (1970), the section entitled "Improving Higher Education," cited an urgent need for improving the quality of undergraduate instruction. Because the teaching assistant system has been frequently linked with poor quality undergraduate instruction, the commission was critical of it and stated that institutions should take measures to improve the system.

Since the mid-1960s, a limited number of research studies have been conducted which focus on questions associated with use of teaching assistants. Clark (1964) found 88 percent of the graduate assistants in selected departments of 47 institutions were performing teaching duties. In these institutions, guided experiences designed to prepare assistants for their expected roles as college teachers were seldom provided. Supervision and evaluation of TAs was found to be either non-exist or minimal. Perceptions of the teaching assistant's role was found by McNally (1966) to differ among teaching assistants and their students. Perceptions of the function of the graduate assistantship (which encompassed the teaching assistantship) were investigated by Fidler (1968) in a Florida statewide study. Relative importance of functions differed among four groups of higher education personnel. State officials concerned with budgeting ranked "assisting faculty" as most important. Administrators ranked "attracting highly qualified graduate students" first. Faculty members placed "internship function" highest. Graduate students ranked "financial support" most important. An apparent problem associated with the graduate assistantship system is the lack of agreement on the relative importance of functions.

Summary. Reflected in the literature is a growing sensitivity to apparent inadequacies of the teaching assistant system by several concerned groups: 1) persons providing financial support for colleges and universities, 2) administrators and faculties of these institutions, 3) students who attend them, and 4) persons who are or have been teaching assistants. Early studies have been concerned with the distribution of stipends by number and dollar value to assistants in various academic areas within institutions of higher education and with duties performed by the assistants. More recent studies have dealt with purposes of graduate teaching assistantships. While these studies are not by program or department specifically related to industrial education, they do identify important variables and provide broadly oriented information essential for continued research.

Population

The population for this study was comprised of graduate teaching assistants employed in industrial education departments of higher education institutions located throughout the United States which grant graduate degrees. All graduate teaching assistants met two criteria: 1) was enrolled in a graduate level program of study and 2) was employed by the institutions to assume teaching responsibilities or to assist regular faculty members with the instructional program of the industrial education department.

Procedures

Population Identification. In March, 1972, a cover letter explaining the nature of the study and an information form (Appendix A) were mailed to each of the 157 industrial education department heads in the 141 institutions having a graduate program. Identification was accomplished by using the

Industrial Teacher Education Directory (Wall, 1971). Department heads were asked to submit the names of graduate students currently employed as teaching assistants or to indicate that no teaching assistants were currently employed in their departments. Information forms were received from 155 (98.7 percent) department heads from 139 institutions. The forms contained the names of 319 individuals serving as teaching assistants according to the definition used for the study. These individuals were employed in 87 (62.6 percent) of the 139 institutions. The remaining 52 institutions indicated no teaching assistants were currently employed.

Instrument Development. Using concerns expressed in the literature, a questionnaire was designed which focused on 1) the type role occupied by the teaching assistant and 2) selected personal and situational characteristics associated with the teaching assistant system.

Four role categories, similar to those presented by Nowlis et al. (1968), were used to classify all respondents. The following personal characteristics were selected as variables for the investigation: 1) age, 2) gender, 3) marital status, 4) military service, 5) non-teaching occupational experience, 6) undergraduate major, 7) desired teaching position level, 8) currently sought degree, 9) total course load, 10) research course load, 11) career goal, 12) teaching experience, and 13) perceived status. The following situational characteristics were selected: 1) months of service, 2) number hours committed to assistantship assignment, 3)contract value, 4) fee waiver value, 5) institution size, 6) department size, 7) faculty assistance, 8) training and supervision, 9) evaluation of performance, and 10) participation in faculty affairs. Questionnaire items were developed for the preceding variables with exception of situational factors 5 and 6. Data for these variables were obtained from the Industrial Teacher Education

Directory (Wall, 1971) and the Higher Education Directory (USOE, 1972).

Instrument Validation. A draft of the questionnaire was submitted to a jury of three industrial education department heads and three non-industrial education teaching assistants. Each member of the jury was asked to examine items in terms of relevance to the study's purpose, clarity, completeness, and ease of responding. Jury members recommended several revisions and additions that were incorporated in the instrument's final form. (Appendix B).

Instrument Administration. In April, 1972, the questionnaire was mailed to a population census. Accompanying the questionnaire was 1) a cover letter explaining the nature of the study and 2) a stamped return address envelope. Ten days after the first mailing, a second set of materials were sent to individuals not responding to the initial contact.

A questionnaire was mailed to 319 teaching assistants, 296 (92.8 percent) responded by June 1, 1972. Of this number 282 (88.4 percent) of the census were judged usable for this study. Non-usable questionnaires resulted primarily from the improper classification of research assistants as teaching assistants on the original request for names. Number of returns by state is displayed in Appendix C. As results are presented in Chapter II, some variation in the total N is evident. This variation results from non-responses for independent items. Therefore, cautious interpretation is recommended.

CHAPTER II

Presentation and Discussion of the Results

Findings reported in this chapter cover three aspects of the teaching assistant system: 1) teaching assistants' background and involvement in educational programs, 2) relationship of instructional role to the nature of teaching assistant employment, and 3) factors associated with teaching assistants' performance, as reported in the literature. Information presented in sections one and three are provided on the aggregate while section two provides a breakdown by role classification.

Teaching Assistants' Background and Involvement In Educational Programs

This section is devoted to a summary of information reported on those items of the teaching assistant questionnaire concerning selected personal and educational program characteristics which provide a profile of the teaching assistant in industrial education programs. Such background information serves as a frame of reference for interpretation of analyses presented in other sections of this chapter.

The profile is presented in two phases. In this analysis, Tables 2 through 7 are primarily concerned with descriptive information pertaining to respondents' background established prior to their employment as teaching assistants. These six tables provide information on age, gender, marital status, military service, non-teaching occupational experience, and undergraduate major. Tables 8 through 11 bear upon characteristics associated with the teaching assistants' educational program and career goal.

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Indicated in Table 2 is teaching assistants' age with a range from 20 to 59 years. The mean age of respondents was 29 years while the median age was 27 years. Approximately 62 percent of the assistants were under

TABLE 2. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY AGE CATEGORY

Age Category	N	Percent
20-24	61	22.0
25-29	112	40.5
30-34	52	18.8
35-39	27	9.7
40-44	16	5.8
45-49	3	1.1
50-54	5	1.8
55-59	1	0.3
Total	227	100.0

the age of 30. However, nearly one fifth (18.7 percent) were age 35 or older.

The anticipated male dominance in teaching assistant employment within industrial education programs was substantiated by data shown in Table 3. Approximately three fourths of the teaching assistants were married (Table 4).

As shown in Table 5, slightly more than half of the 282 respondents have served in the military.

TABLE 3. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY GENDER

Gender	N	Percent
Male	278	98.6
Female	4	1.4
Total	282	100.0

TABLE 4. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY MARITAL STATUS

Marital Status	N	Percent
Single	70	24.9
Married	211	75.1
Total	281	100.0

TABLE 5. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY SERVICE IN THE MILITARY

Military Service	N	Percent
Yes	142	50.4
No	140	49.6
Total	282	100.0

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As evidenced in Table 6, nearly three fourths of the teaching assistants have had full-time occupational experience in fields other than teaching.

TABLE 6. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY YEARS OF NON-TEACHING OCCUPATIONAL EXPERIENCE

Years of Non-Teaching Occupational Experience	N	Percent
0	72	25.5
1-4	120	42.6
5-9	53	18.8
10-14	15	5.3
15 or more	22	7.8
Total	282	100.0

The greatest frequency occurs in the short duration one-to-four year category. However, nearly one third (31.9 percent) have been employed in a non-teaching occupation for 5 or more years. Clearly indicated in Table 7 was the predominance of industrial arts as an undergraduate major. Approximately 47 percent of the respondents reported such a major while another 29 percent listed industrial education as their undergraduate major.

Tables 8 through 11 report the respondents' educational involvement relative to their career goals. Reported in Table 8 is the major field of teaching assistants' currently sought graduate degrees. At the graduate level, industrial education was cited most frequently as a major while

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TABLE 7. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY UNDERGRADUATE MAJOR

Undergraduate major	Number	Percent
Industrial arts	123	46.8
Vocational education	6	2.3
Technical education/technology	39	14.8
Industrial education	77	29.2
Engineering	6	2.3
Other (business, science, etc.)	12	4.6
Total	263	100.0

TABLE 8. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY MAJOR FOR THE CURRENTLY SOUGHT GRADUATE DEGREE

Major for currently sought graduate degree	Number	Percent
Industrial arts	60	23.4
Vocational education	27	10.5
Technical education/technology	34	13.3
Industrial education	85	33.2
Education	34	13.3
Education administration	5	2.0
Curriculum	3	1.2
Other (media, special education, etc.)	8	3.1
Total	256	100.0

industrial arts ranked second. This is a reversal of the ranks listed for the undergraduate major. Approximately 10 percent of the respondents indicated vocational education as their major at the graduate level compared to slightly more than two percent at the undergraduate level.

Reported in Table 9 is an analysis of the type teaching position preferred by the 195 respondents who indicated teaching as their career goal. The four teaching options were specified as 1) four year college or university, 2) junior college, 3) grade 12 or below, and 4) other-participation in an educational program in business, government, or industry. Nearly 40 percent of the respondents indicated a preference for teaching at the secondary level or below and an additional 31 percent reported a preference for a four year college or university teaching position.

The number of credit hours pursued by teaching assistants in course work and research is reported in Tables 10 and 11 respectively. Of the 265 assistants reporting, 37 percent were enrolled in 8 to 11 credit hours of course work concurrently with the assistantship assignment while another 36 percent were enrolled in 12 to 15 credits. Of the 90 respondents indicating enrollment for research credit, nearly half were enrolled in 3 or fewer credits.

Teaching assistants were asked to indicate the total number of hours per week devoted to their academic program. The academic program was defined to include in-class time, study time, research, etc. A mean of 32 hours per week was devoted to all academic pursuits, excluding time committed to responsibilities associated with the teaching assistantship.

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TABLE 9. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY TYPE TEACHING SITUATION DESIRED*

Type Teaching Situation	N	Percent
Four-year college or university	60	30.8
Junior college	29	14.9
Grade 12 or below	77	39.5
Other (industry, business)	8	4.1
Some combination of the above	21	10.8
Total	195	100.0

*Only those respondents indicating a career goal of teaching were included in the tabulation.

TABLE 10. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY NUMBER OF COURSE CREDIT HOURS TAKEN (SPRING 72)

Credit Hours	N	Percent
1-3	16	6.0
4-7	51	19.2
8-11	98	37.0
12-15	96	36.2
16 or more	4	1.5
Total	265	100.0

TABLE 11. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY NUMBER OF RESEARCH CREDIT HOURS TAKEN (SPRING 72)*

Credit Hours	N	Percent
1-3	43	47.8
4-7	29	32.2
8-11	8	8.9
12-15	5	5.6
16 or more	5	5.6
Total	90	100.0

*Only those respondents indicating an enrollment in research credit were included in the tabulation.

Relationship of Instructional Role To Assistantship Employment

Recognizing the existing diversity in educational programs, department sizes, and practices among institutions providing industrial education throughout the country, it is reasonable to anticipate that the kinds of experiences teaching assistants undergo vary among institutions. A fundamental type of variability associated with the teaching assistant program is the diversity in functions performed by persons employed in this position. One method of describing the variability in functions was developed by Nowlis et.al.(1968). The model was composed of four roles which differed in the amount of direct teaching responsibility associated with each teaching assistant's assignment.

A number of factors have been reported in the literature appearing to be distinctly associated with the type of functions teaching assistants perform. Such considerations as the type program, career preparation, professional experience, and selected financial and institutional factors can have a significant interrelationship with roles performed by teaching assistants. The literature reflect a continuing concern for the teaching assistant system and these factors on a university-wide basis.

The purpose of this study was to investigate selected variables and their relationship to the roles or functions performed by teaching assistants within industrial education programs and provide base line information on the current status of the TA system. This section of the report will treat selected variables and their relationship to the four functions or roles identified by Nowlis et al. (1968) and modified for this investigation (see Table 1).

It is widely recognized that the teaching assistantship provides an unusual learning opportunity as well as contributing to the financial

support of the student and the conduct of instructional programs within the institution. If the assistantship position is to serve as a learning opportunity, congruency between the functions performed (role) by the teaching assistant and the TA's career goal, previous preparation, and current preparation is essential to the operation of an effective assistantship program.

Respondents were asked to indicate their career goal by selecting from three categories: teaching, non-teaching in education, and non-teaching non-education. Exhibited in Table 12 is an array of career goals by teaching assistant roles. The consistency between the teaching career objective and assistantship role is indicated by the high level of agreement between these two categories. Approximately 76 percent of the respondents indicated that they were performing in Roles A, B, or C. Each of these roles provide some degree of teaching experience and associated duties. These roles and the duties associated with them are consistent with the kinds of goals selected by the respondents. Interestingly, 57 percent of the TAs who anticipated teaching as career goal were actually employed in a position with high level direct teaching responsibility (Role A).

Respondents were actively pursuing a graduate degree while being employed as a TA. The practice of using graduate students as teaching assistants is widely accepted in institutions throughout the country. However, some concerns exist regarding the type of degree being pursued and the type functions being performed by the teaching assistant. Reported in Table 13 is information tabulated according to the level of graduate degree sought and type teaching assistant role. The large number of master's degree

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TABLE 12. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS CAREER GOAL

Anticipated Career Goal	Teaching Assistant Role								Total	
	A		B		C		D			
	N	%	N	%	N	%	N	%	N	%
Teaching	140	56.7	16	6.5	32	13.0	7	2.8	195	78.9
Non-teaching in Education	10	4.0	1	0.4	2	0.8	2	0.8	15	6.1
Non-teaching Non-Education	17	6.9	3	1.2	14	5.7	3	1.2	37	15.0
Total	167	67.6	20	8.1	48	19.4	12	4.9	247	100.0

TABLE 13. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS LEVEL OF GRADUATE DEGREE SOUGHT

Graduate Degree Sought (level)	Teaching Assistant Role								Total	
	A		B		C		D			
	N	%	N	%	N	%	N	%	N	%
Doctor's	60	22.0	2	0.7	3	1.1	2	0.7	67	24.5
Master's	123	45.1	20	7.3	51	18.7	9	3.3	203	74.4
Other	2	0.7	0	0.0	0	0.0	1	0.4	3	1.1
Total	185	67.8	22	8.1	54	19.8	12	4.4	273	100.0

graduate students (74.4 percent) should be noted. Of the 273 graduate students participating in the program, 185 (67.8 percent) of the students were assigned teaching assistant roles with major instructional responsibility (Role A). If one considers both formal and informal instructional duty involved in assistantship Roles A, B, and C, approximately 95 percent of all TAs have assumed some level of teaching responsibility. Although only 24.5 percent of the teaching assistantship positions are held by doctoral students, approximately 90 percent of this group were employed in the Role A classification. It is interesting to note that approximately 60 percent of the masters level students were also assigned major teaching responsibility (Role A). Approximately twice as many masters level students as doctoral level students were involved in the highest role of instructional responsibility. In general, the information provided in Table 13 indicates that some type of group instructional responsibility is being assumed by most teaching assistants regardless of level of degree being pursued and, not unexpectedly, masters level TAs outnumbered doctoral level TAs approximately three to one.

The number and percent of teaching assistants by role versus the type of undergraduate degree pursued is reported in Table 14. Concern has been expressed in the literature that graduate teaching assistants on a university-wide basis too often have inadequate preparation for teaching. In industrial education 77.5 percent of the teaching assistants had completed undergraduate degrees with a teaching emphasis. Additionally, an analysis of those persons assuming major responsibility for instruction (Role A) shows that 82 percent of the people performing in that role classification pursued an undergraduate degree in teaching. The concerns expressed in the literature regarding preparation of teaching assistants and their assigned

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TABLE 14. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS TYPE UNDERGRADUATE DEGREE EARNED

Undergraduate Degree Earned (type)	Teaching Assistant Role									
	A		B		C		D		Total	
	N	%	N	%	N	%	N	%	N	%
Teaching	150	55.4	16	5.9	36	13.3	8	3.0	210	77.5
Non-teaching	33	12.2	6	2.2	18	6.6	4	1.5	61	22.5
Total	183	67.5	22	8.1	54	19.9	12	4.4	271	100.0

assistantship responsibilities does not appear to apply to TAs employed in industrial education departments.

Prior teaching experience is considered desirable for assuming an instructional role at the collegiate level. This factor is the subject of another concern voiced in relation to the teaching assistantship system. Displayed in Table 15 is an array showing the type of teaching assistant roles and levels of prior teaching experience for TAs in industrial education departments. Slightly over half of all teaching assistants in industrial education had no teaching experience prior to their acceptance of the assistantship assignment. Approximately one quarter however, have had four or more years of teaching experience. Two additional results are worthy of consideration in this analysis. While the number of teaching assistants with experience is relatively low, approximately 74 percent of all teaching assistants with some teaching experience were assigned to Role A, the instructional role with the greatest responsibility for class-room instruction. In contrast to this figure, approximately 61 percent of those teaching assistants without experience were assigned to instructional Role A. The concern for the relationship between prior teaching experience and instructional role does appear to apply to industrial education departments. However, the appropriate use of teaching assistants with prior teaching experience should be noted.

A more detailed analysis of the type of prior teaching experience of the respondents is provided in Tables 15A through 15D. This analysis provides a description of the teaching assistants classified according to the four roles and the type of teaching experience classified as 1) collegiate or university level, 2) junior college level, 3) secondary level or below, and 4) business, industrial, technical institute, and military teaching.

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TABLE 15. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS TOTAL YEARS OF TEACHING EXPERIENCE

Teaching Experience (Total Years)	Teaching Assistant Role A		B		C		D		Total	
	N	%	N	%	N	%	N	%	N	%
0	86	31.1	12	4.4	35	12.9	7	2.6	140	51.1
1 - 3	49	18.0	5	1.8	10	3.7	3	1.1	67	24.6
4 - 6	30	11.0	0	0.0	5	1.8	1	0.4	36	13.2
7 - 9	12	4.4	3	1.1	1	0.4	1	0.4	17	6.3
10 or more	8	2.9	2	0.7	3	1.1	0	0.0	13	4.8
Total	185	67.6	22	8.1	54	19.9	12	4.4	273	100.0

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TABLE 15A. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS YEARS OF TEACHING EXPERIENCE AT THE FOUR-YEAR COLLEGE OR UNIVERSITY LEVEL

Teaching Experience (years)	Teaching Assistant Role								Total	
	A		B		C		D			
Four-Year College	N	%	N	%	N	%	N	%	N	%
0	154	56.4	21	7.8	50	18.3	9	3.3	234	85.7
1 - 3	25	9.2	1	0.4	2	0.7	2	0.7	30	11.0
4 - 6	6	2.2	0	0.0	1	0.4	1	0.4	8	2.9
7 - 9	0	0.0	0	0.0	1	0.4	0	0.0	1	0.4
10 or more	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	185	67.8	22	8.1	54	19.8	12	4.4	273	100.0

TABLE 15B. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS YEARS OF TEACHING EXPERIENCE AT THE JUNIOR COLLEGE LEVEL

Teaching Experience (years)	Teaching Assistant Role								Total	
	A		B		C		D			
Two Year College	N	%	N	%	N	%	N	%	N	%
0	174	63.7	20	7.3	54	19.8	12	4.4	260	95.2
1 - 3	8	2.9	1	0.4	0	0.0	0	0.0	9	3.3
4 - 6	1	0.4	1	0.4	0	0.0	0	0.0	2	0.7
7 - 9	1	0.4	0	0.0	0	0.0	0	0.0	1	0.4
10 or more	1	0.4	0	0.0	0	0.0	0	0.0	1	0.4
Total	185	67.8	22	8.1	54	19.8	12	4.4	273	100.0

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TABLE 15C. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS YEARS OF TEACHING EXPERIENCE AT GRADE 12 OR BELOW

Teaching Experience (years) Grade 12 or below	Teaching Assistant Role A N	A %	B N	B %	C N	C %	D N	D %	Total N	Total %
0	109	39.9	14	5.1	40	14.7	9	3.3	172	63.0
1 - 3	39	14.3	4	1.5	7	2.6	2	0.7	52	19.0
4 - 6	22	8.1	1	0.4	4	1.5	0	0.0	27	9.9
7 - 9	10	3.7	1	0.4	1	0.4	1	0.4	13	4.8
10 or more	5	1.8	2	0.7	2	0.7	0	0.0	9	3.3
Total	185	67.8	22	8.1	54	19.8	12	4.4	273	100.0

TABLE 15D. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS YEARS OF TEACHING EXPERIENCE IN BUSINESS, INDUSTRY, TECHNICAL INSTITUTE AND/OR MILITARY

Teaching Experience (years) Non-education Sector	Teaching Assistant Role A N	A %	B N	B %	C N	C %	D N	D %	Total N	Total %
0	172	63.0	19	7.0	51	18.7	11	4.0	253	92.7
1 - 3	10	3.7	3	1.1	1	0.4	1	0.4	15	5.5
4 - 6	3	1.1	0	0.0	2	0.7	0	0.0	5	1.8
7 - 9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10 or more	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	185	67.8	22	8.1	54	19.8	12	4.4	273	100.0

Approximately 86 percent of the teaching assistants in all roles had no teaching experience at the four year college or university level. However, this figure points up the importance of the assistantship position as intern experience for persons pursuing graduate degrees who have selected teaching as a career goal. It is not surprising, considering factors such as age and prior experience, that many teaching assistants have no experience at the collegiate level. Less than 5 percent of the teaching assistants had experience at the junior or community college level. Nearly 4 out of 10 of the teaching assistants in all roles had some teaching experience in public school programs in grades 12 or below. Approximately 75 percent of the teaching assistants with experience in grades 12 or below had assumed teaching functions involving the highest level of responsibility (Role A) as teaching assistants. Approximately 7 percent of the respondents indicated teaching experience in business, industry, technical institutes, or the military services.

Length of service in a teaching assistantship position constitutes a measure of experience. Depicted in Table 16 is the number and percent of teaching assistants by months of service in their assistantship position (Spring, 1972). The category with the greatest frequency in months of service was that of 5 to 9 months indicated by 57.1 percent of the respondents. This category and perhaps a portion of the 10 to 14 month category would apply to those persons who have been appointed for either an academic or calendar year. The high proportion of teaching assistants in the categories of 14 months or less may be related to the large number of assistants enrolled in masters degree programs.

To provide insight into the financial reward for duties performed as a teaching assistant, several tables are presented. These include information

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TABLE 16. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS MONTHS OF ASSISTANTSHIP SERVICE

Assistantship Service (months)	Teaching Assistant Role								Total	
	A		B		C		D			
	N	%	N	%	N	%	N	%	N	%
1 - 4	14	5.1	2	0.7	9	3.3	2	0.7	27	9.9
5 - 9	103	37.7	13	4.8	35	12.8	5	1.8	156	57.1
10 - 14	33	12.1	5	1.8	10	3.7	5	1.8	53	19.4
15 - 19	18	6.6	2	0.7	0	0.0	0	0.0	20	7.3
20 or more	17	6.2	0	0.0	0	0.0	0	0.0	17	6.2
Total	185	67.8	22	8.1	54	19.8	12	4.4	273	100.0

concerning the number of hours worked per week, the contract value of the assistantship in dollars and the dollar value of any in-state or out-state fee waivers. Because the number of hours worked per week varied among TAs, a financial value index was developed to indicate the financial reward for a unit of work.

An analysis of an important characteristic of the TA system is remuneration. Remuneration must take into consideration the time devoted to assistantship duties and the total financial value of the appointment to the individual. This includes not only the actual dollars received for the assistantship duties performed but also the value of any in-state or out-state fee waiver.

The number and percent of teaching assistants classified by the time devoted to assistantship duties is displayed in Table 17. The extensive range in the number of hours worked (1 to more than 30 hours per week) may result, in part, from assistantship assignments based on a fractional part of a full time equivalent for the contract and partially from variations among institutions regarding work requirements. No attempt was made in the study to ascertain what constitutes a full time teaching assistantship. Within this limitation however, several measures of relationship are worthy of note. Approximately one third of all the teaching assistants were employed 20 to 24 hours per week performing duties associated with their assistantship role. These results are consistent with the findings in a USOE study (Hunter, 1967) involving graduate assistants. Approximately three fourths of all teaching assistants were involved in teaching assistant duties between 10 and 24 hours per week.

Depicted in Table 18 is the number and percent of teaching assistants

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TABLE 17. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS TIME DEVOTED TO ASSISTANTSHIP DUTIES

Time Devoted to Assistantship Duties (hours)	Teaching Assistant Role								Total	
	A		B		C		D			
	N	%	N	%	N	%	N	%	N	%
1 - 4	2	0.8	0	0.0	0	0.0	0	0.0	2	0.8
5 - 9	6	2.3	3	1.1	7	2.7	3	1.1	19	7.2
10 - 14	33	12.5	5	1.9	10	3.8	1	0.4	49	18.6
15 - 19	37	14.1	3	1.1	12	4.6	3	1.1	55	20.9
20 - 24	68	25.9	8	3.0	15	5.7	3	1.1	94	35.7
25 - 29	9	3.4	2	0.8	2	0.8	1	0.4	14	5.3
30 or more	23	8.7	1	0.4	6	2.3	0	0.0	30	11.4
Total	178	67.7	22	8.4	52	19.8	11	4.2	263	100.0

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TABLE 18. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS CONTRACT VALUE OF THE ASSISTANTSHIP IN DOLLARS

Contract Value (dollars)	Teaching Assistant Role								Total	
	A		B		C		D			
	N	%	N	%	N	%	N	%	N	%
1 - 999	8	3.1	1	0.4	5	1.9	1	0.4	15	5.8
1,000 - 1,999	41	15.8	6	2.3	17	6.5	4	1.5	68	26.8
2,000 - 2,999	71	27.3	14	5.4	25	9.6	3	1.2	113	43.5
3,000 - 3,999	41	15.8	1	0.4	2	0.8	2	0.8	46	17.7
4,000 - 4,999	9	3.5	0	0.0	1	0.4	1	0.4	11	4.2
5,000 or more	5	1.9	0	0.0	2	0.8	0	0.0	7	2.7
Total	175	67.3	22	8.5	52	20.0	11	4.2	260	100.0

classified by contract value of their assistantship in dollars. Information provided in this table includes the cash value of the assistantship contract and does not include any accompanying fee waivers. The contract value of the assistantship represents the number of dollars received for an academic year (9 - 10 months). Slightly more than 4 out of 10 of the teaching assistants received between 2,000 and 3,000 dollars for their assistantship services. Only 7 percent of the TAs received more than 4,000 dollars for their assistantship assignment. Additionally, it is likely that the latter group devoted a greater number of hours per week to their assistantship duties.

A fee waiver constitutes an important addition to the contract value of the assistantship. Slightly more than half of the respondents indicated receiving either out-of-state or in-state fee waivers. Approximately 49 percent of the out-of-state fee waivers granted to respondents had a financial value ranging from 500 to 999 dollars for the academic year (see Table 19). Approximately 46 percent of the in-state fee waivers granted to respondents had a financial value ranging from 1 to 499 dollars for the academic year (Table 20). A contrast of these two modal figures for in-state and out-of-state fees may be explained by the greater dollar amount typically associated with out-of-state tuition costs.

A classification of teaching assistants by role and financial value index is given in Table 21. The term financial value index refers to the dollar value received for one hour of assistantship work per week performed throughout the academic year. The index value is computed by considering the hours worked per week, the number of dollars received during the academic year (contract value), and the dollar value of any in-state or out-of-state tuition or fee waiver. The financial value index provides a measure

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TABLE 19. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS DOLLAR VALUE OF OUT-OF-STATE FEE WAIVER

Out-of-state Fee Waiver (dollar value)	Teaching Assistant Role A N	A %	B N	B %	C N	C %	D N	D %	Total N	Total %
1 - 499	8	10.4	0	0.0	3	3.9	0	0.0	11	14.3
500 - 999	26	33.8	4	5.2	6	78.0	2	2.6	38	49.4
1,000 - 1,499	9	11.7	1	1.3	2	2.6	0	0.0	12	15.6
1,500 - 1,999	7	9.1	0	0.0	1	1.3	0	0.0	8	10.4
2,000 or more	5	6.5	0	0.0	3	3.9	0	0.0	8	10.4
Total	55	71.4	5	6.5	15	19.5	2	2.6	77	100.0

TABLE 20. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS DOLLAR VALUE OF IN-STATE FEE WAIVER

In-state Fee Wavier (dollar value)	Teaching Assistant Role A N	A %	B N	B %	C N	C %	D N	D %	Total N	Total %
1 - 499	20	27.8	4	5.6	8	11.1	1	1.4	33	45.8
500 - 999	14	19.4	2	2.8	3	4.2	0	0.0	19	26.4
1,000 - 1,499	4	5.6	0	0.0	1	1.4	1	1.4	6	8.3
1,500 - 1,999	0	0.0	2	2.8	3	4.2	0	0.0	5	6.9
2,000 or more	7	9.7	1	1.4	1	1.4	0	0.0	9	12.5
Total	45	62.5	9	12.5	16	22.2	2	2.8	72	100.0

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TABLE 21. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS FINANCIAL VALUE INDEX

Financial Value Index (dollar value)	Teaching Assistant Role A N	A %	B N	B %	C N	C %	D N	D %	Total N	Total %
1 - 99	26	9.9	2	0.8	9	3.4	1	.04	38	14.4
100 - 199	104	39.5	11	4.2	32	12.2	7	2.7	154	58.6
200 - 299	40	15.2	6	2.3	7	2.7	2	0.8	55	20.9
300 - 399	5	1.9	2	0.8	3	1.1	1	0.4	11	4.2
400 or more	3	1.1	1	0.4	1	0.4	0	0.0	5	1.9
Total	178	67.7	22	8.4	52	19.8	11	4.2	263	100.0

of financial reward based on hours worked. Approximately 6 out of 10 teaching assistants had a financial value index between 100 and 199 dollars. Another 2 out of 10 teaching assistants had a financial value index value of 200 to 299 dollars. A higher financial index value for persons performing in the role requiring the highest level teaching responsibility (Role A) was expected. A statistical test indicated such a relationship did not exist.[1]

Information provided in the following section deals with classification of teaching assistants by role and factors related to institutional practices. Depicted in Table 22 is the association between teaching assistants classified by role and the size of the institution in which they were employed. Size of the institution is classified by the total enrollment at the institution and is not related to the size of departments of industrial education within those institutions. Extensive variations in sizes of institutions providing industrial education throughout the country are evident by the data. The largest percentage of teaching assistants were employed by institutions with enrollments of 5,000 to 9,999 students followed by institutions of 10,000 to 14,999 students. Approximately half of all TAs were employed in institutions of from 5,000 to 14,999. The similarity in the distribution of teaching assistants in Role A to the total distribution of teaching assistants is worthy of note.

The relationship of department size, indicated by the total number of degrees granted in that department, to the number of teaching assistants classified by roles is indicated in Table 23. Nearly half of all teaching

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[1]An analysis of variance did not produce a significant relationship at the .05 level.

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TABLE 22. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS INSTITUTION SIZE

Institution Size (enrollment)	Teaching Assistant Role A N	A %	B N	B %	C N	C %	D N	D %	Total N	Total %
1 - 4,999	9	3.3	3	1.1	6	2.2	2	0.7	20	7.3
5,000 - 9,999	47	17.2	8	2.9	19	7.0	6	2.2	80	29.3
10,000 - 14,999	37	13.6	7	2.6	8	2.9	1	0.4	53	19.4
15,000 - 19,999	23	8.4	0	0.0	6	2.2	1	0.4	30	11.0
20,000 - 24,999	15	5.5	4	1.5	7	2.6	1	0.4	27	9.9
25,000 - 29,999	16	5.9	0	0.0	7	2.6	0	0.0	23	8.4
30,000 or more	38	13.9	0	0.0	1	0.4	1	0.4	40	14.7
Total	185	67.8	22	8.1	54	19.8	12	4.4	273	100.0

TABLE 23. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY ROLE VERSUS DEPARTMENT SIZE (JULY 1970 - JUNE 30,1971)

Department Size (degrees granted)	Teaching Assistant Role A N	A %	B N	B %	C N	C %	D N	D %	Total N	Total %
0 - 49	60	22.0	7	2.6	24	8.8	7	2.6	98	35.9
50 - 99	99	36.3	11	4.0	20	7.3	4	1.5	134	49.1
100 or more	26	9.5	4	1.5	10	3.7	1	0.4	41	15.0
Total	185	67.8	22	8.1	54	19.8	12	4.4	273	100.0

assistants were employed in departments graduating 50 to 99 students during the period July 1970 to June 1971. The teaching assistants' financial value index is classified by department size in Table 24. The modal dollar value for the three classifications of department size in the financial value index was 100 to 199 dollars. A statistical test of relationship was computed for this array of data. Teaching assistants holding appointments in medium size departments (50 to 99) receive significantly greater financial benefits than those holding appointments in either small or large departments. Furthermore, there was no significant difference between the financial rewards for teac ng assistants in small and large departments.[2]

Teaching Assistants' Reaction to Selected Factors Related to the Assistantship

The literature reflects two additional concerns explored in this study relative to the teaching assistantship program. First, there is a general concern for activities designed to provide guidance, assistance, and general measures to improve the quality of the teaching assistantship program within the departments of colleges and universities. Second, there is some question of the general acceptance of the teaching assistant as a colleague by regular faculty members. To assess the concerns, five measures were used to assess opinions of the teaching assistant regarding these factors.

Recognizing that the teaching assistant is typically a neophyte on the instructional team in the industrial education departments, informal assistance rendered to the teaching assistant by regular faculty members constitutes an important means of upgrading the quality of the instructional program.

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[2] Analysis of variance and t-tests were employed and analyzed at the .05 level of significance.

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TABLE 24. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY DEPARTMENT SIZE VERSUS FINANCIAL VALUE INDEX

Financial Value Index (dollar value)	Size of Department: 0 - 49 N	0 - 49 %	50 - 99 N	50 - 99 %	100 or more N	100 or more %	Total N	Total %
1 - 99	21	7.7	12	4.4	6	2.2	39	14.3
100 - 199	55	20.2	75	27.6	25	9.2	155	57.0
200 - 299	16	5.9	40	14.7	4	1.5	60	22.1
300 - 399	2	0.7	8	2.9	2	0.7	12	4.4
400 or more	3	1.1	3	1.1	0	0.0	6	2.2
Total	97	35.7	138	50.7	37	13.6	272	100.0

Teaching Assistants were asked to respond to the level of help or assistance provided to them by regular faculty members in their departments. As indicated in Table 25 nearly one third of the respondents reported that substantial assistance was provided by regular faculty. Approximately 72

TABLE 25. NUMBER AND PERCENT OF TEACHING ASSISTANTS VERSUS OPINION OF EXTENT OF HELP PROVIDED TAs BY REGULAR FACULTY MEMBERS

Extent of Help	N	Percent
Substantial	90	32.1
Some	112	40.0
Little	78	27.9
Total	280	100.0

percent of the TAs indicated that either some or substantial help was provided by faculty members. This level of cooperative assistance appears to indicate the willingness on the part of the faculty to provide direction to teaching assistants in industrial education departments.

There has been much criticism directed at the teaching assistant system in general regarding the lack of adequate preparation and supervision of TAs for their assigned teaching duties. While formal systems appear highly desirable, there are important factors (lack of money, heavy faculty loads, etc.) that may deter the establishment of formal programs to provide training and supervision for teaching assistants. As revealed in Table 26, only 17.2 percent of the respondents indicated that they had participated in any type of formal program of training or supervision.

TABLE 26. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY PARTICIPATION IN A FORMAL PROGRAM OF TRAINING AND SUPERVISION FOR TAs

Participation in Formal Program	N	Percent
Yes	46	17.2
No	222	82.8
Total	268	100.0

Evaluation of teaching assistant's instructional performance is also considered an important means for improving the quality of instruction provided to undergraduate students. Of some concern is the fact that only 20 percent of the teaching assistants responding indicated they had been involved in a formal program of evaluation in their industrial education departments (Table 27).

More than two thirds of the TAs held the opinion that regular faculty

TABLE 27. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY AVAILABILITY OF A FORMAL EVALUATION PROGRAM FOR TAs

Availability of Formal Evaluation Program	N	Percent
Yes	55	20.5
No	213	79.5
Total	268	100.0

members did regard them as junior colleagues rather than temporary employees (see Table 28). This relatively high level of acceptance appears to be in

TABLE 28. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY OPINION OF STATUS

Status	N	Percent
Faculty regards TA as junior colleague	185	68.5
Faculty regards TA as temporary employee	85	31.5
Total	270	100.0

contrast to studies conducted in selected institutions where teaching assistants have voiced a general complaint that they were viewed as low status individuals who performed the tasks no one else wished to do.

The increased acceptance of the teaching assistant as an important member of the industrial education department instructional team is further supported by data in Table 29. Approximately half of the teaching assistants indicated participation in faculty functions through attendance of faculty meetings and service on faculty committees.

TABLE 29. NUMBER AND PERCENT OF TEACHING ASSISTANTS BY PARTICIPATION IN FACULTY AFFAIRS

Participation in Faculty Affairs	N	Percent
Yes	134	50.4
No	132	49.6
Total	266	100.0

CHAPTER III

Summary

The teaching assistant has become an established member of the higher education system of the United States. As an instructional approach the system is viewed as having qualities beneficial to both the student who holds the assistantship and the institution offering the instructional program. The student benefits from income which may be used to offset costs of his graduate program and acquires experience in the instructional process at the college level. The university benefits by having professionally prepared individuals providing instruction at a relatively low cost.

On a university-wide basis, four concerns regarding the system are typically cited: 1) a disproportionate percentage of teaching assistants in relationship to regular faculty, particularly in large institutions, 2) poor quality instruction apparently resulting from pressures associated with an individual functioning in the dual role of student and instructor, 3) low morale among teaching assistants resulting from factors such as low pay, heavy loads, etc., and 4) lack of a clearly defined role for the TA in the higher education system.

The purpose of this study was to provide base-line information on characteristics of teaching assistants and situational factors relative to TA employment in industrial education departments. The study focused on: 1) demographic characteristics of personnel holding assistantship positions, 2) the relationship of roles filled by teaching assistants to selected situational factors of their employment, and 3) practices employed in industrial education departments to facilitate maximum use of personnel in assistantship positions.

A census of the population of graduate students employed as teaching assistants in industrial education departments in the United States was utilized. Of the 319 names submitted by department heads, 282 (88.4 percent) returned usable information for the study. Teaching assistants were employed in 87 (62.6 percent) of the 139 institutions. The mean number of TAs employed in an industrial education department was 3.1. The majority of TAs, approximately 75 percent, were pursuing a masters degree while the remaining assistants were engaged in a doctoral degree program. Their undergraduate preparation was predominantly in the area of industrial arts or industrial education with a teaching emphasis. The career objective of 75 percent of the assistants was teaching.

A total of 23 variables relating to personal characteristics or factors associated with teaching assistant employment were reviewed including financial reward. Slightly more than one third of the TAs worked 20 to 24 hours per week performing assistantship duties. Approximately three fourths of the TAs were involved with assistantship duties between 10 and 24 hours per week. The financial value index, dollar value received for one hour of assistantship work per week performed throughout the academic year, was found to range from 100 to 199 dollars for nearly 60 percent of the assistants. Another 21 percent had an index value ranging from 200 to 299 dollars.

Several factors indicate the positive quality of the TA system in industrial education departments. A majority of teaching assistants indicated they were accepted as colleagues rather than temporary employees and received assistance and direction from departmental faculty in performing their assistantship duties. Formal programs of pre and in-service training and evaluation of assistants were available to approximately one fifth of the TAs. There is an apparent consistency between TAs prior occupational

and educational experience and their assigned responsibilities as a TA. Consistency also exists between the career objective and the role assigned to the TA.

Industrial education departments employing teaching assistants appeared to provide a balance between the use of TAs as an important resource person in the instructional programs and the responsibility for providing both financial assistance and valuable internship experiences to persons pursuing a graduate degree.

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Appendix A

DEPARTMENT HEAD INFORMATION FORM

DATE _____ STATE _____

DEPARTMENT _____

ADDRESS _____

_____

_____

NAME AND TITLE OF PERSON COMPLETING THIS FORM _____

Please list the names of the graduate teaching assistants presently employed in your department. For the purpose of this study the term "teaching assistant" is defined as a graduate student who is (1) currently pursuing requirements for a master's, specialist's or doctor's degree and (2) is employed by the college or university to assume teaching responsibilities or to assist regular faculty members with instruction of undergraduate or graduate students in the industrial education department.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

If additional space is needed, use the back of the sheet.

☐ Check here if no graduate teaching assistants are employed by your department.

Please return to:

Thomas W. Gurbach
Assistant Professor of Industrial Education and Technology
Ball State University
Muncie, Indiana 47306

Appendix B

BEST COPY AVAILABLE

SURVEY FORM FOR GRADUATE TEACHING ASSISTANTS

IN INDUSTRIAL EDUCATION PROGRAMS

The purpose of this study is to ascertain the roles, responsibilities, and characteristics of graduate teaching assistants in industrial education programs.

Instructions:
1. Mark your response directly on the survey form.
2. When blanks are used, fill in the information.
3. When boxes ☐ are used, check the appropriate one(s).
4. Give only ONE response for each item except 7, 11, and 15.

Instrument Number _____

1. Age in years:_____

2. Sex:

☐ Male
☐ Female

3. Marital status:

☐ Single
☐ Married
☐ Other

4. Have you served in the armed forces?

☐ Yes
☐ No

5. Country of citizenship:

☐ United States
☐ Other (specify)_____

6. Indicate the type of bachelor's degree you hold:

☐ Teaching
☐ Non-teaching

7. Give your major for the following degrees:

Undergraduate (specify)_____

_____

Currently sought degree (specify)

_____

8. What degree are you currently seeking?

☐ Doctor's
☐ Master's
☐ Other (specify)_____

9. Indicate the type position you will seek upon completion of your present degree.

☐ Teaching
☐ Non-teaching (in education)
☐ Non-teaching (outside education)
☐ Will continue graduate education

Skip to item 11 unless "teaching" was indicated.

10. What type teaching position will you seek?

☐ Four-year college or university
☐ Junior college
☐ Grade 12 or below
☐ Other (specify)_____

11. How many full academic years of teaching for remuneration in a public or private educational institution did you complete prior to your appointment as a teaching assistant.

	Years
☐ Four-year coll. or univ.	_____
☐ Junior college	_____
☐ Grade 12 or below	_____
☐ Other (specify)	_____

12. How many years of full-time non-teaching work experience were completed prior to your appointment as a teaching assistant?

_____nearest number of years

13. At the end of the present academic year what will be the total number of months you've served as a teaching assistant with the department?

_____months

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14. How many hours do you spend per week working to fulfill the assistantship obligation?

_____hours per week

15. What number of credit hours are you enrolled in this term?

_____hours of course work
_____hours of research

16. What total number of hours per week on an average do you devote to your academic program (class time, study time, research, etc.)?

_____hours per week

17. What is the contract value (gross salary) of your assistantship for an academic year (nine-ten months)?

_____dollars

18. If you receive tuition or fee waiver, what is the total dollar value for the current year?

_____dollars ("in-state" student)
_____dollars ("out-of-state" student)

19. Which of the following would you prefer as a duration of appointment for a teaching assistantship?

- ☐ Academic year (nine-ten months)
- ☐ Calendar year (twelve months)

20. Did (do) you participate in formal departmental or university conducted preservice or in-service program(s) to prepare you for your teaching assistantship, e.g. seminars, workshops, etc.

- ☐ Yes
- ☐ No

21. In your opinion what is the extent of informal assistance provided by a regular faculty member to graduate teaching assistants?

- ☐ Substantial
- ☐ Some
- ☐ Little or none

22. Does the department or other university unit have a formal evaluation program to evaluate individual teaching assistants?

- ☐ Yes
- ☐ No

23. Does the department or other university unit have a promotion procedure within the teaching assistantship system?

- ☐ Yes
- ☐ No

24. If you held a research assistantship instead of a teaching assistantship, what effect do you estimate it would have on the length of time required to obtain your degree?

- ☐ Shorter time with a research assistantship
- ☐ Approximately same time with a research assistantship
- ☐ Longer time with a research assistantship
- ☐ Don't know

25. Do regular faculty members regard you as junior colleagues rather than temporary employees?

- ☐ Yes
- ☐ No

26. Do you participate in faculty affairs such as attending faculty meetings, serving on faculty committees, etc.?

- ☐ Yes
- ☐ No

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27. INSTRUCTIONS: Select the one role (A,B,C, or D) which most nearly describes your current assistantship.

The following describe the four types of teaching assistantship roles with examples of duties and responsibilities the assistant may be assigned.

CHECK ONLY ONE OF THE FOLLOWING.

☐ ROLE A. The teaching assistant has complete or major responsibility for a class or classes. His role is perceived to be similar to that of a regular faculty member with respect to instructional responsibilities.

He teaches and performs the related tasks such as preparation of exams and course materials. He grades projects and papers; counsels students; and evaluates student performance.

☐ ROLE B. The teaching assistant presents occasional lectures and meets with small discussion sections in a course which has one or more lectures per week given by a regular faculty member. He is perceived as an assistant and subsidiary to the faculty member who has the primary responsibility for the course or courses.

Other duties may be assigned such as grading papers and projects; constructing, proctoring and grading exams; and preparing course materials. He may also be available to students in the course for counseling and tutoring.

☐ ROLE C. The teaching assistant supervises the laboratory in a course where a regular faculty member or a higher level teaching assistant conducts the classroom phase of the course. His role is perceived as providing instruction to small groups and individuals informally.

He is responsible for the safe use of the equipment and provides information to users relative to its care and operation. He may set up equipment for demonstration purposes and perform maintenance and repair. In addition he may also be assigned duties such as grading papers and projects; constructing, proctoring and grading exams; preparing course materials and controlling supplies.

☐ ROLE D. The teaching assistant may occasionally meet with individual students, but does not meet classes or supervise laboratories. His role is perceived as providing non-instructional assistance to faculty members.

He performs such tasks as grading papers, reports and projects; preparing, proctoring and grading exams. He may perform clerical tasks. He may be available for limited help to students in a course. He may perform maintenance and repair on equipment.

Appendix C

NUMBER OF TEACHING ASSISTANTS AND INSTITUTIONS RESPONDING TO SURVEY FORM BY STATE

State	Number of teaching assistants	Number of institutions
Alabama	1	1
Arizona	17	2
California	15	3
Colorado	5	2
Florida	4	1
Georgia	4	2
Illinois	32	8
Indiana	7	3
Iowa	9	2
Kansas	9	1
Kentucky	12	4
Louisiana	3	1
Maine	1	1
Maryland	8	1
Michigan	20	6
Minnesota	12	5
Mississippi	3	2
Missouri	13	5
Nebraska	4	2
New Jersey	3	2
New Mexico	2	1
North Carolina	8	3
North Dakota	4	1
Ohio	24	5
Oklahoma	6	3
Oregon	3	1
Pennsylvania	2	1
South Carolina	4	1
Tennessee	6	1
Texas	16	7
Utah	6	1
Washington	7	4
Wisconsin	8	1
Wyoming	4	1
Total	282	85